## ABSTRACT OF THE DISCLOSURE

In a turbine apparatus comprising a runner rotatable to be rotationally driven by a water, a gain of a derivative calculation element generating a derivative component of a control signal for controlling a flow rate of the water which derivative component is to be applied to the derivative calculation element and the integration calculation element by performing differentiation on a difference between an actual rotational speed and a desired rotational speed of the runner with respect to a time proceeding has a value sufficiently increased to converge a value of the control signal toward a desired value in accordance with the time proceeding in S-characteristic portion.